No.

<u> AHIBUNIABD SHANFS ORAMIBRIOR</u>

<u>TO ALL TO WHOM THESE; PRESENTS; SHALL COME;</u>

Cotton Seed International Proprietary Limited (ACA 065 327 915) & Anper CrapScience Cmb H

LILOTONS, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC EPPENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY ${
m LAW}$, THE TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR ING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE RPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'FM 966LL'

In Testimon Mercent, I have hereunto set my hand and caused the seal of the Hant Bariety Fraterium Office to be affixed at the City of Washington, D.C. this seventh day of August, in the year two thousand and six.

U.S. DEPARTMENT OF AGRICULTURE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and

SCIENCE AND TECHNOLOGY - P	LANT VARIETY P	ROTECTION OFFICE	1	Paperwork Reduction Act (PRA) of		
APPLICATION FOR PLANT VAI (Instructions and information col	RIETY PROTECT lection burden sta	ION CERTIFICATE tement on reverse)	(7 t	nlication is required in order to determ J.S.C. 2421). Information is held cor	nine if a plai ofidential un	nt variety protection certificate is to be issued til certificate is issued (7 U.S.C. 2426).
1. NAME OF OWNER	******			TEMPORARY DESIGNATION OR	3. VARIE	TY NAME
Joint Owners 1. Cotton Seed International Proprietary Limited (ACN 085 327) 2. Bayer CropScience (MBH LALL 4/13/66) PCR EF44) L	915)			EXPERIMENTAL NAME 222LL	FM 96	6LL
4. ADDRESS (Street and No., or R.F.D. No., City,		de, and Country)	5.	TELEPHONE (include area code)		FOR OFFICIAL USE ONLY
1. Shenstone	2. Ind	ustriepark Hochst	(66	2) 686-9235	PVPO NI	
Culgoora Road Wee Waa, New South Wales 2388	K 6	07 Iningstrasse 50	È			
Australia	659	26 Frankfurt am Main	0. 1	FAX (include area code)	2/	00500135
	Ger	many	(66	2) 686-5605	FILING D	PATE
 IF THE OWNER NAMED IS NOT A "PERSON", ORGANIZATION (corporation, partnership, associated) 	GIVE FORM OF ciation, etc.)	8. IF INCORPORATED, GIVE STATE OF INCORPORATION		DATE OF INCORPORATION	,	
Limited liablility company					TEC	3RUARY 14, 2006
10. NAME AND ADDRESS OF OWNER REPRESE	NTATIVE(S) TO	SERVE IN THIS APPLICATION. (First	t person	listed will receive all papers)	F E	FILING AND EXAMINATION FEES:
Michael Swindle					Ē	· 3,652.00
Cotton Breeder Bayer Cotton Seed International					R	DATE 2/14/05
117 Kennedy Flat Road					E ~	CERTIFICATION FEE:
Leland, MS 38756					į	,768.00
					E	DATE 61/13/01
11. TELEPHONE (Include area code)	12. FAX (Includ	de area code)	1	13. E-MAIL	D	7/15/00
(662) 686-9235	(662) 686-5	•		michael.swindle@bayercr	onscienc	e com
14. CROP KIND (Common Name)		AME (Botanical)		18. DOES THE VARIETY CONTA	. •	
Upland Cotton	Malvaceae					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
15. GENUS AND SPECIES NAME OF CROP	17. IS THE VA	RIETY A FIRST GENERATION HYBR	SID?	IF SO, PLEASE GIVE THE AS	SSIGNED U	SDA-APHIS REFERENCE NUMBER FOR THE
Gossypium hirsutum cs	☐ YES			COMMERICALIZATION.	No 02-04	TE THE GENETICALLY MODIFIED PLANT FOR 12-01p
 CHECK APPROPRIATE BOX FOR EACH ATTA (Follow instructions on reverse) 	ACHMENT SUBM	ITTED		20. DOES THE OWNER SPECIFY OF CERTIFIED SEED? (See	THAT SEE	ED OF THIS VARIETY BE SOLD AS A CLASS (a) of the Plant Variety Protection Act)
a. 📝 Exhibit A. Origin and Breeding History	of the Variety					1 22 below) NO (If "no", go to item 23)
b. Exhibit B. Statement of Distinctness				21. DOES THE OWNER SPECIFY NUMBER OF CLASSES?	THAT SEE	ED OF THIS VARIETY BE LIMITED AS TO
c. A Exhibit C. Objective Description of Veri	iety			YES NO		
d. 🕢 Exhibit D. Additional Description of the	Variety (Optional)		IF YES, WHICH CLASSES?	☐ FOUND	DATION REGISTERED CERTIFIED
e. 📝 Exhibit E. Statement of the Basis of the	e Owner's Owners	ship	Ī	22. DOES THE OWNER SPECIFY NUMBER OF GENERATIONS		D OF THIS VARIETY BE LIMITED AS TO
f. Voucher Sample (2,500 viable untreate	ed seeds or, for tui	ber propagated varieties,		YES NO		·
verification that tissue culture will be de repository)	eposited and main	tained in an approved public		IF YES, SPECIFY THE NUMBI	ER 1,2,3, et	IC. FOR EACH CLASS.
g. Filing and Examination Fee (\$3,652), m	nade payable to "T	reasurer of the United		☐ FOUNDATION ☐ RE	CICTEDES	CERTIFIED
States" (Mail to the Plant Variety Protec	tion Office)					ase use the space indicated on the reverse.)
23. HAS THE VARIETY (INCLUDING ANY HARVES FROM THIS VARIETY BEEN SOLD, DISPOSED OTHER COUNTRIES?	STED MATERIAL) D OF, TRANSFER) OR A HYBRID PRODUCED RRED, OR USED IN THE U.S. OR		24. IS THE VARIETY OR ANY CO	MPONENT	OF THE VARIETY PROTECTED BY ANT BREEDER'S RIGHT OR PATENTY?
YES NO				YES NO		
IF YES, YOU MUST PROVIDE THE DATE OF I FOR EACH COUNTRY AND THE CIRCUMSTA	FIRST SALE, DIS NCES. <i>(Please L</i>	POSITION, TRANSFER, OR USE use space indicated on reverse.)		IF YES, PLEASE GIVE COUNT REFERENCE NUMBER. (Plea		OF FILING OR ISSUANCE AND ASSIGNED to indicated on reverse.)
The owners declare that a viable sample of basi a tuber propagated variety a tissue culture will b	ic seed of the vari	ety has been furnished with application	n and wi	Il be replenished upon request in ac	cordance w	ith such regulations as may be applicable, or for
The undersigned owner(s) is(are) the owner of t entitled to protection under the provisions of Sec	his sexually repro	duced or tuber propagated plant variet			tinct, uniforr	n, and stable as required in Section 42, and is
Owner(s) is (are) informed that false representa-		-	lties			
SIGNATURE OF OWNER		,		URE OF OWNER		
m. 1. 10	7		OIOIA	ONE OF OWNER		
NAME (Please print or type)			NAME (F	Please print or type)		
Michael Swindle			,	• • • • •		
CAPACITY OR TITLE	DATE		CAPACI	TY OR TITLE	DATE	W32-
Cotton Breeder		2/13/05	Cotto	n Breeder		

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initiated and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office Telephone: (301) 504-5518 FAX: (301) 504-5291

Homepage: http://www.ams.usda.gov/science/pvpo/pvpindex.htm

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 http://www.ams.usda.gov/lsg/seed.htm.

ITEM

- 19a. Give:
- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
- (2) the details of subsequent stages of selection and multiplication;
- (3) evidence of uniformity and stability; and
- (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
 - (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
- 20. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
- 23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
- 24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.
- 22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)
- 23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

USA: 20 August 2004

24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

See attached page (form ST470 Line 24) attached page: Did not have enough room.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Attached page from Form ST470 Line 24 continued

Bar Gene:

 Patent Number
 5561236

 Patent Number
 5648477

 Patent Number
 5646024

Patent Date 01/10/1996
Patent Date 15/07/1997
Patent Date 08/07/1997

Event LL25: Patent Number 6818807

Patent Date 16/11/2004

FM 966:

PVP Number 200100209

PVP Date 8/27/2004

EXHIBIT A

ORIGIN AND BREEDING HISTORY

VARIETY: FM 966LL BRAND: FiberMax®

FM 966LL is among the first generation of LibertyLink® cotton seed varieties which are bred to utilize a new weed control technology for cotton. LibertyLink cotton contains a single, simply-inherited transgene, called LL25, which confers resistance to glufosinate-ammonium, the active ingredient in Ignite® herbicide sold by Bayer CropScience.

The LL25 transgene was introgressed (backcrossed) into E0222 [FM 966 (PVP#200100209)] beginning in November 1998. All introgression work was done inside a glasshouse located at the Bayer Cotton Seed International-Delta Research Station near Leland, MS. After the initial cross between FM 966 and a Coker 312 donor parent harboring LL25 transgene, F₁ plants were backcrossed to FM 966 (Table 1). Throughout introgression, plants routinely were sprayed with Ignite herbicide to identify LL25 containing plants. Subsequent quality control (QC) measures were performed on all transgenic and non-transgenic parent plants to confirm presence of LL25 and absence of other potential contaminating transgenes. This procedure was continued until the BC₃ F₁ generation where plants were self-pollinated. Resulting BC₃F₂ plants were sprayed with Ignite, and surviving plants were tested for transgene homozygosity. Homozygous plants were identified and harvested individually in 2000. Progeny from each homozygous plant constitute a sister-line. Evaluation for selection of individual homozygous plants and resulting sister-lines commenced immediately. Data such as percent lint and various fiber quality parameters were measured, and results were used to begin selection of lines similar or superior to FM 966. Lines from selected plants were further increased in counter-season nurseries in Costa Rica and in-season near Leland, MS, USA, in the winter of 2000-2001 and summer of 2001, respectively. Further seed increases for testing and pure-seed multiplication purposes were performed in 2002, 2003, and 2004 in both U.S. and counter-season locations. Internal multi-location, multi-year performance and evaluation trials were performed in order to select final line(s) that constitute the finished variety FM 966LL. These same trials also were used to evaluate performance of the new variety relative to existing commercial varieties. These sister-line trials and evaluations were performed in 2001, and 2002. New variety evaluations were performed in 2003 and 2004. FM 966LL also was tested in several states' public Official Variety Trials in 2003 and 2004. Commercial-scale seed increases commenced in 2002 in Arizona, followed by a counter-season increase in Costa Rica in winter of 2002-2003. Large-scale seed increases were made in various regions of the U.S. Cotton Belt in 2003, and the first commercial sales of FM 966LL were made in the spring of 2004.

Note that transgenic event LL25 received full regulatory approval from the USDA in March 2003. The assigned USDA-APHIS reference number for the approved petition to deregulate LLCotton25 is No 02-042-01p.

FM 966LL has been observed for six generations of reproduction and is stable and uniform. During this observation period, 100% of plants were observed to be tolerant to the glufosinate herbicide (Ignite). No variants were observed.

Q

PLANT VARIETY PROTECTION APPLICATION

Table 1. CONVENTIONAL BACKCROSSING SCHEME FOR LIBERTYLINK VARIETY DEVELOPMENT

BREEDING PROGRESSION

YEAR	1998	1999	1999	1999	2000	2000	2000-2001	2001	2001-2002	2002	2002-2003	2003	2004
WHERE	glasshouse	glasshouse	glasshouse	glasshouse	glasshouse	glasshouse	counter-seaason in Costa Rica	field in USA	counter-seaason in Costa Rica	field in USA	counter-seaason in Costa Rica	field in USA	field in USA
မွ	Trait, event nontarget	Trait, event nontarget	Trait, event nontarget	Trait, event nontarget	Trait, event nontarget	Trait, event nontarget	Trait	Trait, event nontarget	Trait	Trait, nontarget	Trait	Trait	
PRODUCE	Ē.	BC, F,	BC ₂ F ₁	BC ₃ F ₁	BC ₃ F ₂	ъ.	π	E S	т <mark>.</mark>	4	rr.	Etc.	Etc.
	sgene Source	arent	arent	arent	ite	etc. ase	ase	es 		ase		ase	ease
PLANT	Coker 315/LL25 Transgene Source	Recurrent Parent	Recurrent Parent	Recurrent Parent	Self pollinate	Self pollinate, etc. Purify, increase	Purify, Increase	Trials, Increase	Increase	Trials, Increase	Increase	Trials, Increase	Commercial Release
	×	×	×	×	self	self	self.	self	self	self	self		
	FM 966	щ	BC, F	BC ₂ F ₁	BC ₃ F ₁	BC3 F2	ቪ	ιτ ₂	ъ́°	m _e	4	Etc.	Elc.

EXHIBIT B

NOVELTY STATEMENT

VARIETY: FM 966LL BRAND: FiberMax®

FM 966LL is similar and closely resembles DP 436RR, but can be distinguished from its comparator variety DP 436RR by the following: FM 966LL contains the single transgene LL25 from Bayer CropScience, while DP 436RR does not; FM 966LL has a storm proof boll while DP 436RR does not; FM 966LL has a longer and wider boll than DP 436RR; FM 966LL has a higher height to first fruiting branch than DP 436RR: FM 966LL sets fruit one node higher than DP 436RR; FM 966LL has longer peduncles than DP 436RR; FM 966LL has a greater stigma distance above stamens than DP 436RR; FM 966LL has a higher lint percentage than DP 436RR; FM 966LL has a greater fiber strength than DP 436RR.

BCSI Research Station, Leland, MS 2004 Conditions: Planting date April 28, field grown irrigated trial with conventional management. Trial design for distinguishing characters: 5 entry trial in a row and column design with six replications and 14m plots. Measurements taken from 10 plants from each plot. Trial design for yield and fiber data: 32 entry trial, random complete block design with 3 replications and two 14m row plots.

BCSI Research Station, Leland, MS 2005 Conditions: Planting date May 18, field grown irrigated trial with conventional management. Trial design for distinguishing characters, yield and fiber: 32 entry trial, random complete block design with 3 replications and two 14m row plots. For distinguishing characters: measurements were taken from 10 plants, from each of the 14m plots.

Analysis of variance procedures were used to obtain least significant difference at the 5% level, using Agrobase software.

REPRODUCE LOCALLY. Include form number and date on all reproductions

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0551-0055. The time required to complete this information collection is estimated to average 2.75 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whilten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE BELTSVILLE, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY

Exhibit C

W.		Cotton (Go	ssypium spp.)	·	
NAME OF APPLICANT (S)		TEMPORARY OR EXPERIME		VARIETY NAME	
Bayer Cotton Seed Inte	ernational	E0222LL		FM 966LL	
ADDRESS (Street and No. or RD No., C	City, State, Zip Code and Coun	try)		FOR OFFICIAL USE ONLY	
				PVPO NUMBER	
117 Kennedy Flat Road	l, Leland MS 387	56			
				2005001	35
measurements, snould repre	sent those that are ty	etal characteristics of this vari r <u>pical</u> for the variety. Data for I may be used to determine pl	quantitative plant chara	. Characteristics described, including r ters should be based on a minimum of	numerical 100 plants. Royal
SPECIFIC VARIETIES USE	D FOR COMPARISO	N AS CHECK VARIETIES IN	THIS APPLICATION	Jse standard regional check varieties th	nat are adapted to
MSV 1. Delta Pineland	DD 400D	be the most similar variety (M		opineto 2	
		valiety 2.	v	ariety 3.	
1. SPECIES:					
X G. hirsutum	L.	G. barbade	nse L.		
2. AREA(S) OF ADAPTATION	ON (A = Adapted, NA	. = Not Adapted, NT = Not Tes	sted):		
A Eastern		A Delta	A Central	NT Blacklands	
A Plains		A Western	NA Arizona	NA San Joaquin	
Other (Spec	zify):				
3. GENERAL: General Pla	ent Type		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		****
	Application Variety	MSV 1	Comparisor	Variety 2 Comparison Variety	3
Plant Habit: Spreading, Intermediate, Compact	Intermediate	Intermediate			
Foliage: Sparse, Intermediate, Dense	Intermediate	Intermediate			
Stem Lodging: Lodging, Intermediate, Erect	Erect	Erect			_
Fruiting Branch: Clustered, Short, Normal	Short	Normal	<u></u>		
Growth: Determinate, Intermediate,	Intermediate	Intermediate			

3. GENERAL: (continued)					
Leaf Color:	Application Variety	MSV 1	Comparison Variety 2	Comparison Variety 3	
Greenish yellow, Light green, Medium green, Dark green	Medium Green	Medium Green			
Boll Shape : Length less than Length equal to width, Length more than width	width, Length>Width	Length>Width			
Boll Breadth: Broadest at base, Broadest at middle	Middle	Middle			
4. MATURITY: (50% Open b	olls; Preferred method; Des	cribe method if different metho	d was used)		
Date of 50% open bolls:	19 September	13 September			
5. PLANT:					
cm to 1st Fruiting Branch: (from cotyledonary node)	15.73	13.6	***************************************		
No. of Nodes to 1st Fruiting (excluding cotyledonary node)		5.89	<u> </u>		
Mature Plant Height cm: (from cotyledonary node to terminal	116.0	108.6			
6. LEAF: (Upper most fully ex	xpanded leaf)				
Type: Normal, Sub Okra, Okra, Super Okra	Normal	Normal	·		
Pubescence : Absent, Sparse Medium, Dense <u>OR</u> Trichomer (Bottom surface excluding vein	s/cm ²	Sparse			
Nectaries: Present or Absent	Present	Present			
7. STEM PUBESCENCE:					
Glabrous, Intermediate, Hairy	Intermediate	Intermediate			
8. GLANDS: (Gossypol) Abse	ent, Sparse, Normal, More th	nan Normal			
Leaf:	Normal	Normal			
Stem:	Normal	Normal			
Calyx Lobe: (normal is absent	Absent/Normal	Absent/Normal			
9. FLOWER:					
Petals: Cream, Yellow	Cream	Cream			
Pollen: Cream, Yellow	Cream	Cream			
Petal Spot: Present, Absent	Absent	Absent			
10. SEED:					
Seed index: (g/100 seeds, fuzzy basis)	11.8	10.7			
Lint Index: (g lint/100 seeds)	7.3	6.2			

		· · · · · · · · · · · · · · · · · · ·		74.	200500	0135	Exhibit C (Cotton)
11. BOLL:						_	
Lint Percent: X Picked Pulled	38.20	35.35					
OR					*		
Gin Turnout: Picked Stripped							
Number of Seeds per Boll _	32.5	33.7					
Grams Seed Cotton per Boll	5.8	5.6					
Number of Locules per Boll	4.3	4.2					
Boil Type: Stormproof, Storm Resistant, Open	en) Storm Resist	Open					
12. FIBER PROPERTIES:		*				VI	
Specify Method (HVI or Other):	HVI						
Length: (inches, 2.5% SL)	1.18	1.17					
Uniformity (%):	84.5	84.5					
Strength, T1 (g/tex)	34.5	28.6					
Elongation, E1 (%)	7.8	8.2					
Micronaire:	4.5	4.7				· .	
Fineness (Source)							
Yarn Tenacity: (cN/tex, 27 tex)							
Yarn Strength: (lbs. 22's)							
13. DISEASES: (0 = Not Tested, O Alternaria ma		rately Susceptible, 3	3 = Model	rately Resistant, 4 = Resista Fusarium Wilt	nt)		
0 Anthracnose			0	Phymatotrichum Root Ro	ıt .		
0 Ascochyta B	light		0	Pythium (specify species)		
4 Bacterial Blig	ht (Race 1)		0	Rhizoctonia solani			
4 Bacterial Blig	ht (Race 2)		0	Southwestern Cotton Rus	st		
	ht (Race)		0	Thielaylopsis basicola			
Diplodia-Boll	Rot		3	Verticillium Wilt			
Other (Specif	fy)				·		

00000	10
200500	55 Exhibit C (Cotton).

3 ■ Root-Knot Nematode	1 ■ Reniform Nematode
1 Boll Weevil	1 ■ Grasshopper (specify species):
1 Bollworm	1 Lygus (specify species):
1 Cotton Aphid	1 E Pink Bollworm
1 Cotton Fleahopper	1 Spider Mite (specify species):
1 Cotton Leafworm	1 stink Bug (specify species):
1 Culworm (specify species):	Thrips (specify species):
1 🖫 Fall Armyworm	Tobacco Bud Worm
1	

^{15.} COMMENTS: Present any additional information that cannot adequately be described in 1 through 13, which significantly distinguished your variety.

200500135 Exhibit D AAA 03/09/2006

PLANT VARIETY PROTECTION APPLICATION

APPENDIX A

SOURCE OF DATA AND STATISTICAL ANALYSIS FOR EXHIBIT B AND EXHIBIT C

Descriptions of general characteristics, and of leaf, stem, gland and flower characteristics, along with plant description information (height and nodes to first fruiting branch, and final mature plant height) were collected from 10 plants in each 6 replications. The field trial was designed specifically for these measurements in 2004 and taken from an internal trial in 2005 at the Bayer Cotton Seed International-Delta Research Station, Leland, MS (Tables 2 & 3). Soil type at this location is a Boskett very-fine, sandy-loam. Other data obtained from these plots were measurements of maturity differences, lint percent and fiber properties. Results of statistical analyses are found in Table 4.

Internal data was collected for lint yield per acre (3-replications) from six locations (Wilson, AR; Tunica, MS; Clarksdale, MS; Leland, MS; Thornton, MS; St. Joseph, LA) in 2004 and four locations (Alamo, TN; Clarksdale MS; Leland, MS; Tallulah, LA) in 2005 (Tables 5 & 6). In addition, fiber data from these locations can be found in Tables 7 Additional morphological data was taken as visual ratings regarding strain uniformity, plant height, disease reaction, visual maturity, plant type, boll type, boll size, leaf pubescence, stalk lodging, agronomic appeal, and leaf type were made only at Leland, MS, for two years, 2004-05 (Tables 9 & 10). A key for the rating can be found in Table 11.

Information on reaction to Fusarium wilt disease was obtained from the Auburn University 2004 National Cotton Fusarium Wilt Report (Table 12). Information on reaction to Bacterial Blight disease was obtained from the Texas A&M Agricultural Experiment Station Lubbock, TX, 2004 Blight Test (Table 13).

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TABLE 2. PLANT MEASURMENT ANALYSIS PVP TRIAL -LELAND, MS 2004

					!		414		i .
	BULL_LEN	BULL_WID	CMFB	Z Z	Ī	181	PED	LOCKS_BOLL	SILEN
ENTRY_NAME	(mm)	(mm)	(cm)	(cm)	(cm)	(cm)	(mm)	(number)	(mm)
FM 966LL	1.98	1.33	16.71	6.43	117.68	11.43	2.35	4.22	3.43
DP 436RR	1.90	1.22	14.88	5.77	113.28	11.80	2.00	4.03	2.20
GRAND MEAN	1.97	1.29	18.48	6.63	118.41	11.71	2.43	4.20	3.01
C.V.,%	2.90	2.91	7.45	4.33	4.37	5.62	6.30	4.50	15.62
LSD (0.05)	20:0	0.05	1.66	0.35	6.23	0.79	0.18	0.23	0.57

TABLE 3. PLANT MEASURMENT ANALYSIS PVP INTERNAL TRIAL -LELAND, MS 2005

	BOLL_LEN	BOLL_WID	CMFB	NFB	Η	FB1	PED	LOCKS_BOLL	ST_LEN
ENTRY_NAME	(mm)	(mm)	(cm)	(cm)	(cm)	(cm)	(mm)	(unuper)	(mm)
FM 966LL	2.01	1.38	14.74	7.13	114.20	9.37	2.09	4.30	3.63
DP 436RR	1.83	1.31	12.38	6.03	104.43	6.55	2.06	4.27	2.77
GRAND MEAN	1.95	1.36	15.68	7.32	114.65	8.81	2.26	4.34	3.49
C.V.,%	1.56	1.55	14.69	5.99	4.03	19.70	5.30	2.42	11.48
LSD (0.05)	90'0	0.04	4.34	0.83	8.70	3.27	0.23	0.20	0.75

TABLE 4. FIBER AND BOLL TRAITS FROM PVP TRIAL-LELAND, MS 2004

		Length	Len. Unif	Strength	Elongation			Boll Size
Entry Name	Lint %	(in)	(%)	(g/tex)	(%)	Micronaire	Seed Index	(D)
-M 966LL	2'88	1.19	82.8	35.8	7.7	4.3	11.6	63
DP 436RR	35.7	1.20	85.4	26.0	7.7	4.5	11.1	5.7
Mean	37.9	1.22	85.7	31.9	7.6	4.3	11.3	22.8
C.V., %	2.4	2.2	9.0	2.7	2.8	5.1	4.8	14.4
LSD (0.05)	0.7	0.02	0.4	0.7	0.2	0.2	0.4	90

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TABLE 5. 2004 TRANSGENIC COMMERCIAL VARIETY TRIAL - HERBICIDE TOLERANT - BCSI DRS (MS DELTA)

YIELD DATA ACROSS ALL LOCATIONS

MEAN % LINT MEAN LOCS MS Leland AR Wilson MS Clarksdale 38.9 1207 1382 1269 1243 40.2 1233 1519 1119 1335 35.5 1125 1363 1240 1097 39.6 1216 1448 1152 1228 1.8 10.4 8.1 10.1 8.4						LBS LINT/ACRE			
. 38.9 1207 1382 1269 1243 40.2 1233 1519 1119 1335 A 35.5 1125 1363 1240 1097 D MEAN 39.6 1216 1448 1152 1228 C.V.,% 1.8 10.4 8.1 10.1 8.4 A.M. O.S. 60 128 124 124	ENTRY NAME	MEAN % LINT	MEAN LOCS	MS	AR Wilson	MS Clarksdale	MS Tunica	MS Thornton	LA StJoseph
40.2 1233 1519 1119 1335 MEAN 39.6 1216 1448 1152 1228 C.V.,% 1.8 10.4 8.1 10.1 8.4 A.O. I.S 60 438 436 434	FM 966LL	38.9	1207	1382	1269	1243	1224	1344	1017
MEAN 35.5 1125 1363 1240 1097 C.V.,% 1.8 10.4 8.1 10.1 8.4 A.O. 51 0.3 60 4.38 4.26 4.24	FM 966	40.2	1233	1519	1119	1335	1057	1233	1233
39.6 1216 1448 1152 1228 1228 1.8 10.4 8.1 10.1 8.4 10.1 8.4	DP 436RR	35.5	1125	1363	1240	1097	840	066	1143
1.8 10.4 8.1 10.1 8.4 0.3 c.0 4.28 4.28 4.28	GRAND MEAN	39.6	1216	1448	1152	1228	1015	1274	1175
138 138 136	C.V .,%		10.4	8.1	10.1	8,4	12.0	13.9	9.0
121 00 100 100	LSD (0.05)	0.3	09	138	136	121	143	208	125

TABLE 6. 2005 TRANSGENIC COMMERCIAL VARIETY TRIAL - HERBICIDE TOLERANT - BCSI DRS (MS DELTA)

YIELD DATA ACROSS ALL LOCATIONS

-				LBS LINT/ACRE	Ш	
ENTRY NAME	MEAN % LINT	MEAN LOCS	MS Leland	MS Clarksdale	LA Tallulah	TN Alamo
FM 966LL	37.5	1039	955	790	1155	1148
FM 966	38.4	914	846	269	1154	924
DP 436RR	35.2	086	1050	999	1176	096
GRAND MEAN	38.5	1044	1003	818	1242	1114
C.V .,%	2.3	12.1	9.0	12.0	7.0	11.1
(50.0) USJ	9.0	85	124	132	126	169

TABLE 7. 2004 TRANSGENIC COMMERCIAL VARIETY TRIAL - HERBICIDE TOLERANT - BCSI DRS (MS DELTA)

FIBER DATA ACROSS ALL LOCATIONS

•			ME/	MEAN HVI FIBER QUALITY	QUALITY	
	BOLL SIZE	LEN	UNIF	STREN	ELONG	
ENTRY NAME	(a)	(ii)	(%)	(g/tex)	(%)	MIC
FM 966LL	2.2	1.19	84.9	35.0	7.6	4.5
FM 966	5.6	1.16	84.9	33.1	7.8	4.7
DP 436RR	5.9	1.17	84.9	29.5	8.0	4.7
GRAND MEAN	5.4	1.17	84.8	32.2	7.8	4.7
C.V., %	16.5	2.1	0.7	6.2	3.7	4.3
(20.0) UST	0.5	0.02	0.4	1.4	0,2	0.1

TABLE 8. 2005 TRANSGENIC COMMERCIAL VARIETY TRIAL - HERBICIDE TOLERANT - BCSI DRS (MS DELTA)

FIBER DATA ACROSS ALL LOCATIONS

			ME	MEAN HVI FIBER QUALITY	QUALITY	
	BOLL SIZE	LEN	JINN	STREN	ELONG	
ENTRY NAME	(g)	(in)	(%)	(g/tex)	(%)	MIC
FM 966LL	5.8	1.16	84.0	34.0	6.7	4.6
FM 966	5.8	1.17	84.8	35.0	7.9	4.6
DP 436RR	5.2	1.16	84.1	27.6	8.3	4.6
GRAND MEAN	2.6	1.17	84.4	31.8	8.2	4.6
C.V., %	9.2	1.7	8'0	4.1	2.5	4.4
(SD (0.05)	0.3	0.02	0.5	1.0	0.2	0.2

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TABLE 9. 2004 TRANSGENIC COMMERCIAL VARIETY TRIAL - HERBICIDE TOLERANT - BCSI DRS (MS DELTA)

MORPHOLOGICAL DATA-LELAND, MS 2004

ENTRY NAME	STR UNIF	PLT HT	DIS RXN	MAT PCT	PLT TYPE	BOLL TYPE	VBOLL SIZE	LEAF_PUB (STLK LOG	AGR APP	LEAF TYPE
FM 966	1	5	1	9	9	9	9	9	-	5	Normal
FM 966LL	1	9	1	20	9	9	9	8	Υ-	5	Normal
DP 436RR	1	9	1	80	6	ဗ	2	80	-	4	Normal

TABLE 10. 2005 TRANSGENIC COMMERCIAL VARIETY TRIAL - HERBICIDE TOLERANT - BCSI DRS (MS DELTA)

MORPHOLOGICAL DATA-LELAND, MS 2005

ENTRY NAME	STR UNIF	PLT HT	DIS RXN	MAT PCT	PLT TYPE	BOLL TYPE V	VBOLL SIZE	LEAF_PUB	STLK LOG	AGR APP	LEAF TYPE
FM 966	1	2	1	65	9	9	9	7	1	9	Normal
FM 966LL	2	9	1	20	9	9	9	7	_	9	Normal
DP 436RR	2	9	1	70	8	က	4	8	က	5	Normal

TABLE 11. VISUAL FIELD RATINGS KEY

Strain Uniformity	1=uniform	5=slightly variable	9≕highly variable
Plant Height	1=short	5=normal (check)	9=rank
Disease Reaction	1=no symptoms	5=some symptoms	9=severe
Maturity (PERCENT OPEN)*)* 10%= late	50%=mid	90%=very early
Plant Type	1=cluster	5=intermediate	9=open
Boll Type	1=loose	5=intermediate	9=storm proof
Boll Size	1=small	5=intermediate	9=large
Leaf Pubescence	1=pubescent	5=semi-smooth	9=glabrous
Stalk Lodging	1=upright	5=slightly lodged	9=severely lodged
Agronomic Appeal	1=poor	5≕avg.	9=excellent
Leaf Type	1=hirsute	2=okra	3=mixed
* T-1:			

* Taken @ 130 days after planting

PUBLISHED DATA

TABLE 12. 2004 Fusarium Wilt Test, Plant Breeding Unit, EVSRC, Tallassee, AL.

			•		Percent wilted plants	ted plants		
Plot No.	Line Designation	Variety	rep 1	rep 2	rep 3	rep 4	Ava.	P-value
2507	BCSI-JJG-7	FM 966LL	15	10	11	0	6	0.350
Suceptible	Check	Rowden	54	89	81	2	57	<,0001
Resistant	Check	M-315	0	0	-	0	0	0.973

TABLE 13. 2004 Bacterial Blight Trial, Texas A&M Agricultural Experimental Station, Lubbock, TX.

est Note:

The 2004 blight test consisted of 42 entries, including a susceptible (PM 2326 RR) and resistant (TAMCOT Sphinx) control. The frequent rain events created some problems with the applications, and resulted in symptoms being slower to develop and developing on lower leaves than in most years. However, it was still possible to differentiate between susceptible or resistant classes. The bacteria used was IS-15, which was initially isolated from the High Plains, applied at 1,000,000 bacteria/ml of water, using 50 gal of water/acre, applied at a pressure of 20 psi.

Entry	Designation	Blight rating	Description
32	Paymaster 2326 RR	0.98 ab	Susceptible
19	FiberMax 966LL	0.26 e	Partially Resistant
42	Tamcot Sphinx	0.00 f	Resistant
	MSD	90.0	

MSD is the minimum significant difference, based upon the Waller-Duncan k-ratio t-test (P=0.05).

REPRODUCE LOCALLY. Include form	n number and edition date on all	reproductions.	FORM APPROVED - OMB No. 0581-0058
U.S. DEPARTMENT O AGRICULTURAL MARI EXHIBI STATEMENT OF THE BA	KETING SERVICE T É	Application is required in order to det certificate is to be issued (7 U.S.C. 2 confidential until the certificate is issued.	termine if a plant variety protection 421). The information is held
1. NAME OF APPLICANT(S)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
oint Owners 1. Cotton Seed Internati ACN 065 327 915) 2. Bayer CropScienc	lonal Proprietary ce GmbH	E0222LL	FM 966LL
4. ADDRESS (Street and No., or R.F.D. No.	, City, State, and ZIP, and Country)	5. TELEPHONE (Include area code)	6. FAX (Include area code)
Shenstone Culgoora Road Wee Waa, New South Wales 2388	Industriepark Hochst K 607 Bruningstrasse 50	(662) 686-9235	(662) 686-5605
Australia	65926 Frankfurt am Main Germany	7. PVPO NUMBER	~
9. Doog the configurations of stable to		e appropriate block. If no, please expl a	Ó ùn. ☑YES ☐ NO
As a part of a joint venture company. I		ived variety version of FM 966. ased company? If no, give name of c	
Australia 2.Germany	oany) a 0.3. Halional of a 0.3. p	aseu company? IT no, give name of c	ountry. YES NO
10. Is the applicant the original owner	r? YES	NO If no, please answer <u>one</u>	of the following:
b. If the original rights to variety	were owned by a company(ies),	1. Australia 2.Germany is (are) the original owner(s) a U.S. ba NO If no, give name of counts 1. Australia 2.Germany	
11. Additional explanation on owners	hip (Trace ownership from origir	nal breeder to current owner. Use the re	everse for extra space if needed):
FM 966LL was developed soley b	y the faculty of Bayer Cotton S veloped solely by CSIRO of Au	eed International, MS, 117 Kennedy F astralia. The joint owners retains all co	lat Road Leland MS 39756. The
PLEASE NOTE:			
Plant variety protection can only be a	fforded to the owners (not licens	ees) who meet the following criteria:	
If the rights to the variety are owner national of a country which affords	d by the original breeder, that pe similar protection to nationals of	erson must be a U.S. national, national f the U.S. for the same genus and speci	of a UPOV member country, or ies.
If the rights to the variety are owner nationals of a UPOV member coun genus and species.	d by the company which employ try, or owned by nationals of a c	red the original breeder(s), the company country which affords similar protection	must be U.S. based, owned by to nationals of the U.S. for the same
3. If the applicant is an owner who is a	not the original owner, both the	original owner and the applicant must m	neet one of the above criteria.
The original breeder/owner may be th Act for definitions.	e individual or company who dir	rected the final breeding. See Section 4	11(a)(2) of the Plant Variety Protection
Control harriber. The value Cond control harriber to	r tois information collection is USK1-DUSS	and a person is not required to respond to a collectic The time required to complete this information collect and maintaining the data needed, and completing and	refine in actional ad to assume a 0 d basses as a second

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